

Automation of some units of a sinter plant. (Cont.) 133-5-1/27

decreased a signal for stoppage is given. The above system was designed by A.N. Balon, engineer and V.A. Busygin, electrician.

2) The control of feeding sinter strand. The arrangement consists of two pairs of electrodes (Fig. 2). One pair is placed in the feeding bunker below the bottom electrode controlling the level of the feed in the bunker. If the bunker is empty the electric circuit between the electrodes is broken and the drum feeder stops and simultaneously the supply of air to the igniter is also stopped. The second pair of electrodes is placed in front of the cut-off plate one at normal level of the bed height and the other 25-30 mm higher. If the level of the mix on the strand in front of the cut-off plate reaches the top electrode, a relay decreases the number of revolutions of the feeding drum until the level of the feed on the strand falls below the electrode. The opposite takes place if the level of the mix falls below the bottom electrode. (The designer of the scheme as in 1).

3) Automatic control of strand speed. This is based on the differential temperature between the last two wind boxes. (Fig. 3).

Card 2/3 4) Automatic stopping of conveyor belts on blocking of chutes.

Automation of some units of a sinter plant. (Cont.) 133-5-1/27

This is based on the closing of the electrical circuit between electrode and earth when on blocking of a chute the level of the material transported rises to the level of the electrode.

5) Automatic protection of conveyor belt from hot return fines. The return fines are usually fed on to the conveyor covered with some other mix components. Four plate-like electrodes are placed in pairs over the conveyor before and after the bunkers containing return fines (Fig. 5). In order to start the return fines feeder table, both pairs of electrodes should be submerged in the mix. With this protection the life of the conveyor reached 13 months.

6) A vibrator for chutes delivering sinter mix. A vibrator automatically switching on every three minutes (Fig. 6).

7) Automatic stopping of conveyors on breaking or slipping. A centrifugal regulator mounted inside a conveyor roller (Fig. 7). When the roller stops rotating the circuit is closed stopping the conveyor belt. There are 7 diagrams.

ASSOCIATION: Vysokogorsk Agglomeration and Beneficiation Combine.
(Vysokogorskiy Agloobogatitelnyy Kombinat)

AVAILABLE:

Card 3/3

RAVIKOVICH, Kh.A.

Importance in the general complex of geochemical studies of determining ammonium ions in waters of oil- and gas-bearing formations. Geol. nefti i gaza 6 no.11:45-48 N '62. (MIRA 15:12)

1. Sredneaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnykh gazov.

RAVIKOVICH, Kh.A.; KARIMOV, A.K.

Hydrochemical and geochemical criteria for determining the oil
and gas potentials of Fergana and Usturt. Neftegaz. geol. i
geofiz. no. 12:33-37 '63. (MIRA 17:5)

1. Institut geologii i razrabotki neftyanykh i gazovykh
mestorozhdeniy AN UzSSSR.

RAVIKOVICH, Kh.A.

Biochemical sulfate reducing processes in oil and gas field waters
and their significance as exemplified by the Fergana Valley.
Neftgaz. geol. i geofiz. no.11:37-41 '65. (MIRA 18:12)

1. Sredneaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta prirodnogo gaza.

RAVIKOVICH, Kh.A.

Results of the combined studies of the Tertiary reservoir
fluids of Fergana. Geol. nefti i gaza 6 no.2:45-49 F '62.
(MIRA 15:2)

1. Sredneaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
institut prirodnikh gazov.
(Fergana--Oil reservoir engineering)

B/BADAGLY, V.A.; RAVIKOVICH, Kh.A.; KUDRYASHOV, Ye.V.; ATAULLIN,
E.I.; Pristavitskiy, GONCHAROV, E.S.; IONINA, I.N.,
ved. red.

[Lithology, tectonics, and oil and gas potentials of the
northeastern margin of the Fergana Depression] Litologiya,
tektonika i neftegazonostost' neogenovykh otlozhenii
severo-vostochnogo borta Ferganskoi depressii. [By] V.A.
B. badagly i dr. Leningrad, Nedra, 1964. 181 p.

(MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirod-
nykh gazov. Sredneaziatskiy filial

RAVIKOVICH, Kh.A.

Subsurface oxidation of hydrocarbons. Geol. nefiti i gaza 4 no.1:53-
57 Ja '60. (MIRA 13:10)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya Pergannefte-
kombinata. (Hydrocarbons) (Oxidation)

RAVIKOVICH, Kh.A.

New hydrochemical indicators in petroleum prospecting. Azerb.
neft.khoz.36 no.2:3-6 F '57. (MLRA 10:4)
(Fergana--Oil field brines)
(Fergana--Water, Underground)

RAVIKOVICH, Kh.A.

Distribution of iodine and bromine in underground waters of the
Fergana Valley. Geol. nefti i gaza 4 no. 12:49 D '60.
(MIRA 13:12)

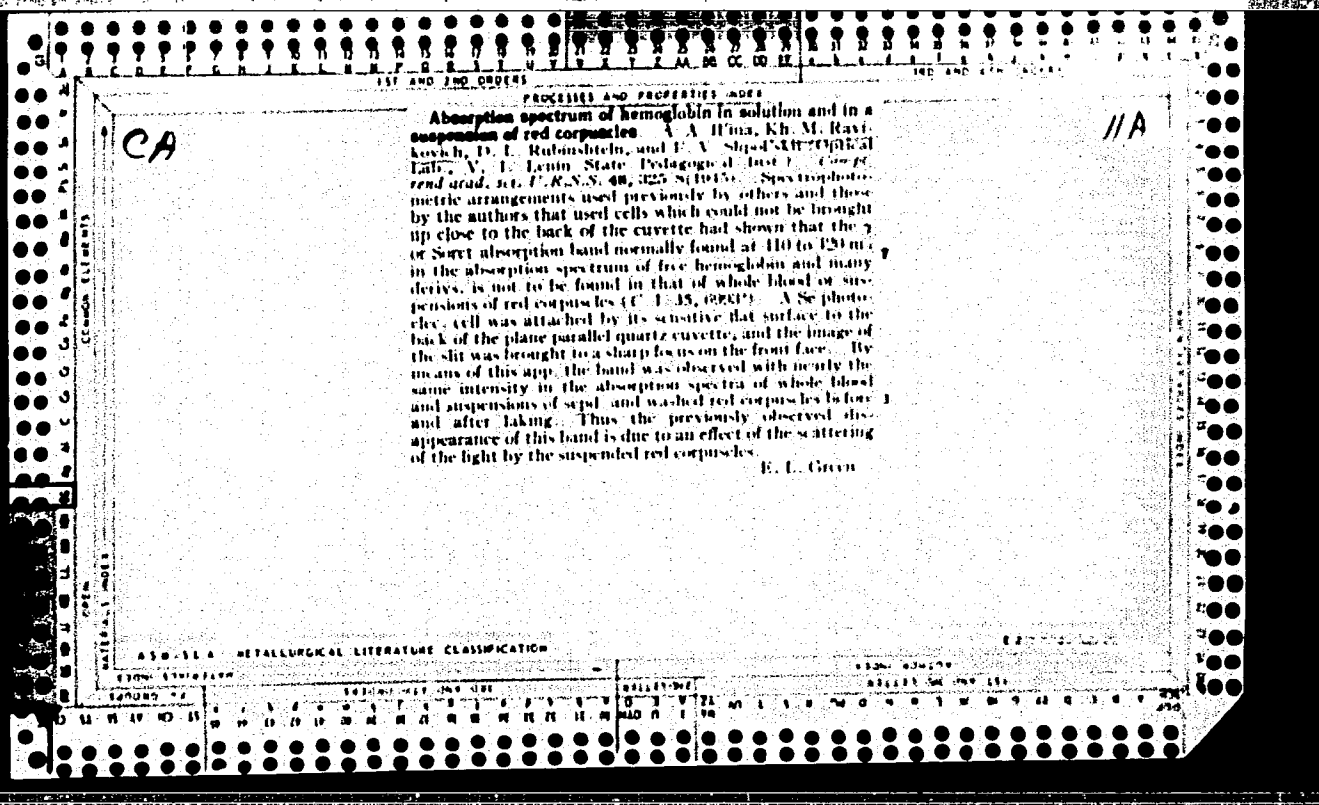
1. Ferganskiy neftyanoy kombinat.
(Fergana--Water, Underground--Analysis)

The electrolytic preparation of copper zinc nickel alloy. N. A. Izgarshyeva and Kh. M. Rakhimbayev, *J. Gen. Chem.* (U. S. S. R.), 9, 1113 KS (1930). The electrolytic prepn. of the Cu-Zn-Ni alloy by the Faust and Monthoulet method (C. A. 20, 3003) and 20, 2505) was not applicable for the theoretical investigation of the cathode process nor for the applied purposes because of poor reproducibility of the exptl. data and instability of the cyanide solns. The deposition simultaneously of 2 or 3 metals was carried out in the presence of colloids. The added substances caused the approximation of the potential of metal depositions. This method of "approximation of the deposition potential" was used in the simultaneous deposition of Cu-Zn, Cu-Ni, Ni-Zn and Cu-Zn-Ni from their sulfate solns. in the presence of 1% H_2BO_3 and with the addn. of gum arabic or cresolsulfonic acid. The Cu-Zn-Ni alloy prepn. by this method was of high durability and of a fine-grain structure. All polarization curves of the above systems can be represented by the equation $\Delta\phi = \Delta\phi_0$, where $\Delta\phi$ is the difference between the potential at certain C, A, B , and the equil. potential, $\Delta\phi_0$ is a const., corresponding to the initial conditions of the process and A is a const.

A. A. Felzornov

Lab. Electrophoresis & Immunoprecipitation
Cell Culture - Electrophoresis & Incub. AS USSF

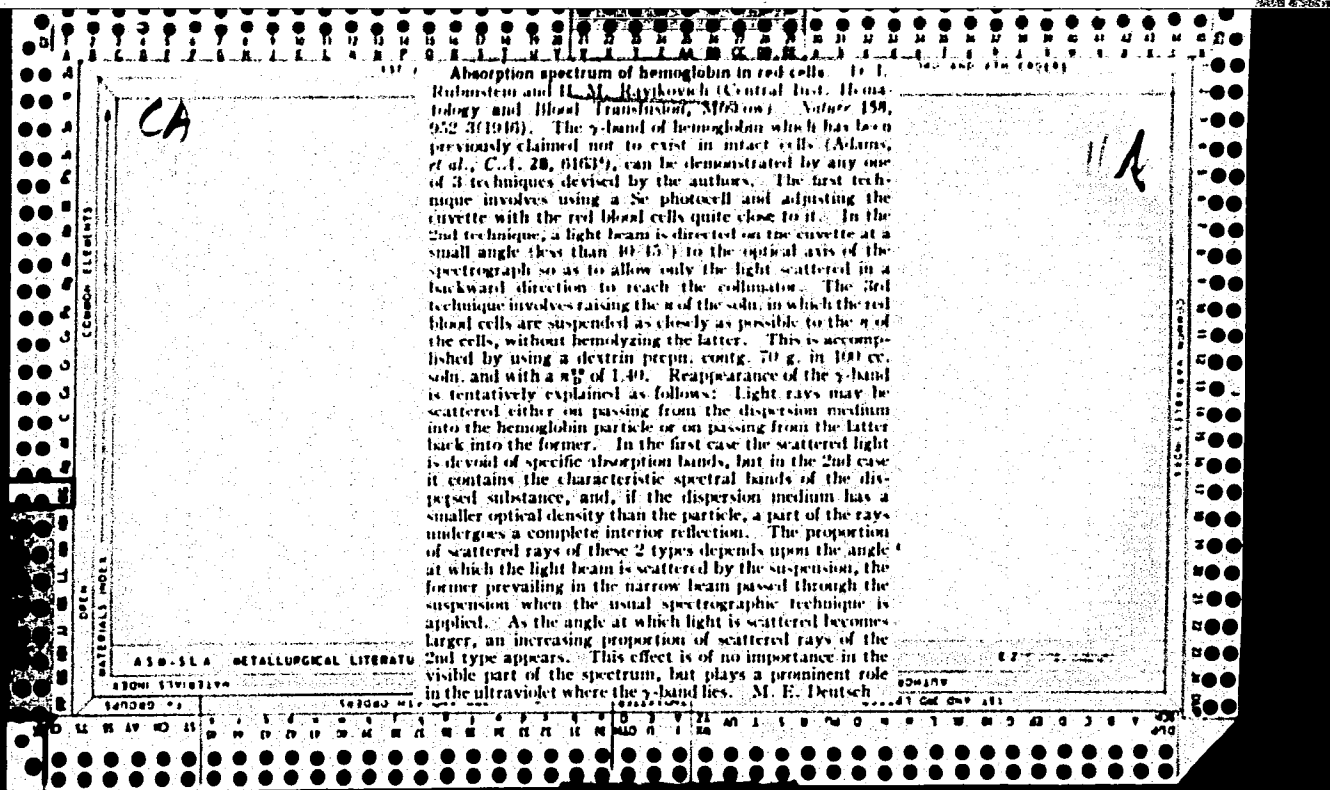
ASB 31.0 METALLURGICAL LITERATURE CLASSIFICATION



RAVIKOVICH, Kh. M.

"Absorption Spectrum of Red Corpuscles as Influenced by the Refractive Index of the Medium," Dokl. AN SSSR, 51, No.5, 1946

Central Inst. Hematology and Blood Transfusion, AMS



USSR/Medicine - Spectrum Analysis
Medicine - Albumin

Oct 1947

"Absorption Spectrum of Structural Albumin of Muscles in the Ultraviolet Range," Kh. M. Ravikovich, O. N. Setkina, K. D. Leyont'yeva, Lab Phys Chem, Inst Biol and Med Chem, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 3

Gives results of experiments conducted to study the absorption spectrum of muscle albumin in the ultraviolet range, and use of spectrographic method for future study of the kinetics of the processes of interrelation between myosin and actomyosin with ATP (adenosinephosphoric acid). Submitted by Academician Ya. O. Parnas, 26 Jun 1947.

FID

49764

RAVIKOVICH, Kh. M.

42626. Ul'trafiioletovyye Spektry Pogloshcheniya Strukturnykh Belkov Myshtsy. (Doklad. I Preiya Na VI Soveshchani Posppektroskopii. Keyev. May 1948 G) Izvestiya Akad. Nauk SSSR, Seriya Fiz., 1948, No. 5, S. 625-27--Bibliogr: 5 Nazv.

CA

11

Ultraviolet absorption spectra of structural muscle proteins. Kh. M. Rayshovich (Inst. Biol. i Med. Khim. A.M.N., U.S.S.R.). *Izv. Akad. Nauk S.S.R., Ser. Fiz.* 12, 625-7(1948).—The muscle proteins are myosin and actin combined with actomyosin and decompl. during the contraction of the muscle by adenosinetriphosphoric acid (ATP) with myosin as a specific enzyme. Spectra in KCl soln. show tryptophan, tyrosine, and phenylalanine in myosin and tyrosine and tryptophan in actin; actomyosin has the same spectrum as myosin. Addn. of glycogen shifts the max. towards short wave lengths by 50-170 Å. Upon addn. of ATF the 2775 Å. band of the myosin spectrum shifts to the short wave lengths, indicating the formation of an unstable complex. S. Pakser.

1ST AND 2ND COPIES																																																	
PROCESSED AND PROPERTIES INDEX																																																	
CA 11A Absorption spectra of compounds of glycogen with proteins. R. L. Rosenfeld and K. M. Mavumich. <i>Doklady Akad. Nauk S.S.S.R.</i> 90, 45-7 (1971).—Addn. of rabbit or frog muscle glycogen, in a phosphate buffer of pH 7.1-7.2, to myosin, the final concn. of glycogen being 1 mg./ml. and that of myosin 3.1 mg./ml. (0.5 mg. N/ml.), shifts the absorption max. of the myosin (at about 2800 Å.) to shorter wave lengths by 40-170 Å. The magnitude of the shift is detd. solely by the glycogen used and does not depend on the kind of myosin. With the same glycogen, the value of the shift depends on its amt.; it increases up to about 1 mg. glycogen per 0.5 mg. N of myosin and then remains practically const. The shift is found only with muscle glycogen, is very small with liver glycogen. Starch gives no shift at all. N. Thon																																																	
ASD-51A METALLURGICAL LITERATURE CLASSIFICATION																																																	
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RAVIKOVICH, KH. M.

67T26

USSR/Chemistry - Spectra, Absorption
Chemistry - Albumins May 1948

"Variations in the Spectral Properties of the Structural Albumins of the Muscles in the Presence of Adenosin-Triphosphoric Acid," Kh.M. Ravičovich, O.N. Seržina, E.D. Leont'eva, Inst of Biol and Med Chem, Acad Med Sci USSR, 4 pp

"Det Ak Nauk SSSR, Nov Ser" Vol IX, No 6

Describe results of studies conducted on the absorption spectra of albumin and adenosin-triphosphoric acid (ATP) in the ultraviolet band of the spectrum to determine the physical and chemical properties of

67T26

USSR/Chemistry - Spectra, Absorption
(Cont'd) May 1948

myosin and actomyosin, and their variations in the presence of ATP. Submitted by Academician Ya.O. Farnes 25 Mar 1948.

67T26

RAVIKOVICH, Kh. M.

23599.

KHARAKTERISTIKA I PROISKHOZHdENIY• MEDLENNYKh POTENTsIALOV SPREDNECO MOZGA LYaGUSHKI.
(DOKLAD I PRENIYa). V SB: GAGRSKIY• BESEDY (PO EKSPERIM. BIOLOGII). T. I. TBILISI,
1949, c. 253-63--BIBLIOGR: c. 261.

SO: LETOPIS' NO. 31, 1949

EX

100 AND 4TH COPIES

PROCESSES AND PROPERTIES INDEX

Absorption spectra of myosine complex with polysaccharides. Kh. M. Ravikovich: *Doklady Akad. Nauk S.S.S.R.* 67, 451-4(1949). - Spectra of myosine and glycogen in 0.6 M KCl (0.12 mg. N and 0.24 mg. glycogen per ml.) show a displacement by 100 Å. of the 2775-Å. band to shorter-wave region. Since this band is due to tyrosine-tryptophan, tests with pure amino acids were run and showed loss of the 2780-Å. band, with 2640-, 2680-, and 2650-Å. bands appearing with one glycogen sample, and 2600- and 2630-Å. bands with another sample. G. M. K.

3

Inst. Biol. i Med. Chem. AM S USSR

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

SDOM DIVISION

SDOM DIVISION

SDOM DIVISION

RAVIKOVICH, Kh. M.

USSR

* Spectral change in protein complex formation. Kh. M. RAVIKOVICH, *Vestnik Leningrad. Univ.* 5, No. 3, 1961 (1966), cf. C.A. 43, 8885b. Spectra of cryst. trypsin and sulfate protamine mixt. at pH 9 (5 mg. trypsin and 80 mg. protamine) show a displacement by 110 Å. of the 2800-Å. band to the shorter-wave region. Displacement takes place at the first 15 min. of the reaction, after 30-80 min. spectral shifts occur to the long-wave region, and after 24 hrs. spectral max. coincides with absorption band of trypsin. About 73% breakdown of protamine takes place during the first 15 min. Neither protamine nor the products of its breakdown give an absorption band in this region. Trypsin with protamine give a labile complex having its own absorption band in the short-wave region. M. C.

BB

gm

RAVIKOVICH, Kh. M.

Reaction of azlactones (oxazolones) with amines. S. I. Iur'ia, S. M. Manlofe, and Kh. M. Ravikovich, Zhur. Obshchei Khim. (J. Gen. Chem.) 21, 1308-16 (1951)--Azlactones with alkyl or aryl groups in the 4-position react with amines to form amides of the corresponding acids. If the 4-position is occupied by a HO or EtO group, the reaction with amines gives amides of the corresponding acids, amides of acids whose HO groups are replaced by amino groups, or azalactones in which the HO or EtO group is replaced by an amino group. Heating 5 g. 2-phenyl-4-isopropylidene-5(4H)-oxazolone and 2.32 g. PhNH₂ in C₆H₆ 2 hrs. at 6-70° gave 70% α-benzamido-B, B-dimethylacrylanilide, decomp. 276-30°, absorption max. 2600 Å.; hydrolysis with 12% HCl gave BzOH and PhNH₂. Similarly, 2-phenyl-4-benzylidene-5(4H)-oxazolone gave 85% α-benzamidocinnamanilide, m. 230-2°, max. 2615 Å. 2-Benzyl-4-benzylidene-5(4H)-oxazolone gave 80% α-(phenacylamino) cinnamanilide, m. 197-8° (from MeOH), max. 2850 Å. 2-Methyl-4-benzylidene-5(4H)-oxazolone and PhNH₂ in C₆H₆ react in the cold, yielding, on refluxing 1 hr., 73% α-acetanidocinnamanilide, m. 133-90° (from MeOH), max. 2840 Å. Likewise 2-phenyl-4-(1-hydroxyethylidene)-5(4H)-oxazolone gave 55% α-benzamido-B-phenylcrotonanilide, m. 137-9° (from EtOH), max. 3220 Å., which with hot HCl gave BzOH and PhNH₂. Piperidine in the reaction above gave 1-(α-benzamido-B-hydroxycrotonyl) piperidide, m. 140-2° (from EtOH-Et₂O), gives a blue color with FeCl₃. 2-Phenyl-4-ethoxymethylene-5(4H)-oxazolone and PhNH₂ in C₆H₆ gave 60% 2-phenyl-4-anilinomethylene-5(4H)-oxazolone, m. 158-60° (from C₆H₆), and a more sol. compd., C₁₆H₁₂O₂N₂, m. 163-70°, probably 2-phenyl-4-(phenylureido) oxazole; heating the former with MeONa in MeOH gave 41% α-benzamido-B-anilinoacrylate, m. 132-4°. 2-Phenyl-4-ethoxymethylene-5(4H)-oxazolone and piperidine in hot C₆H₆ gave 50% 2-phenyl-4(1-piperidinomethylene)-5(4H)-oxazolone, m. 123-4.5°, and 1-(α-benzamido-B-ethoxyceryl) piperidine, m. 333-40°. The starting substituted 5(4H)-oxazolones, prepd. conventionally (a.p. and

KASAVINA, B. S.; RAVIKOVICH, Kh. M.

Spectroscopic investigation of actin fractions of muscle proteins in ontogenesis. Doklady Akad. nauk SSSR 79 no.5 (CLML 21:1) 833-835 11 Aug 1951.

1. Laboratory of the Biochemistry of Cancer and the Institute of Biological and Medical Chemistry, Academy of Medical Sciences USSR. 2. Presented by Academician G. G. Urazov 16 May 1951.

11-11

The composition of the actin fraction of muscle proteins in ontogenesis. Kh. M. Ravičevich and B. S. Kasavina. *Doklady Akad. Nauk S.S.S.R.* 22: 115-17 (1962). The actin content of muscle protein was followed spectrographically. The absorption max. 2500 Å. is seen in chick- and rabbit-embryo muscle proteins; after birth the max. shifts to 2750 Å., which corresponds to adult value. The high absorption intensity in early stages of embryogenesis can be explained by predominance in the muscle complex of a non-protein component with strong absorption at 2000 Å. This can be the complex of the protein with nucleic acid. Detn. of ribonucleic acid in chick specimens at various stages of growth showed the highest level at 16 days of embryonic age, although the absorption max. 2000 Å. persists throughout the entire embryonic period. However, after emergence the content of ribonucleic acid declines and the absorption max. shifts to the higher wave lengths. The intensity of absorption of the actin fraction declines in embryogenesis parallel with decline of ribonucleic acid. In adult hen having very little ribonucleic acid the intensity of absorption is high again, but this is connected with accumulation of protein. In the rabbit max. ribonucleic acid is found at 20-4 days of embryonic life; the spectral behavior is analogous to that in the chick. Hence, in the actin fraction of hen and rabbit muscle there is little ribonucleic acid; the content is higher in the growing developing tissues of the embryos, when it is largely held in a complex with the tissue proteins. In the actin fraction there is present a nucleotide component with max. absorption at 2000 Å., which appears to be ribonucleic acid.

G. M. Kosolapoff

Just Biol. &
Med. Chem. AMS USSR.

RAVILOVICH, KH. M.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Biological Chemistry

(3)
Content of nucleic acids in the yolk of hen eggs. Zh. G. Shinerling and Kh. M. Ravilovich (Inst. Biol. Med. Chem., Acad. Med. Sci., U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 93, 883-6(1953).—The usual methods are not suitable for the detn. of nucleic acids in egg yolk because of very high phosphoprotein content. The method used consisted of fat removal by treatment with Me_2CO and EtOH in the cold, then with heating in $\text{Et}_2\text{O}-\text{EtOH}$, and the nucleic acids were isolated from the residue by extn. with 10% NaCl and pptn. with EtOH . The final ppt. contains other P compds. besides nucleic acids. It was then extd. with 5% $\text{CH}_3\text{CO}_2\text{H}$ at 90° , and the ext. was extd. with Et_2O , the latter ext. was then used for spectrophotometric detn. of nucleic acids; in some expts. the final ppt. was hydrolyzed with H_2SO_4 and the purine pptd. as Ag salts which were then detd. spectrophotometrically. The absorption max. 2600 A. was used. The unfertilized egg yolk contains 0.0074% nucleic acid on dry wt. of defatted yolk; fertilized egg 0.0087, 2-day egg 0.0083, 4-day egg 0.00824, 8-day egg 0.007. Qual. tests for ribonucleic acid were pos., those for deoxyribonucleic acid were neg. C. M. K.

RAVIKOVICH, KH. M.; MAUERMAN, O. YE.; YAPLOKOVA, M. L.;
KHROMETSKAYA, T. M.; DIMITRIYEVA, YE. M.

"A decade of experience in using gamma-globulin for the prophylaxis
of children's infections (measles, scarlet fever, whooping cough.)"

Report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists. 1959

SOSKIN, L.S.; RAVIKOVICH, M.A.

Aneurysms of the cerebral vessels; survey of foreign literature.
Vop.neirokhir. 24 no.1:38-44 Ja-P '60. (MIRA 13:10)
(INTRACRANIAL ANEURYSMS)

TORKUNOVA, Z.A.; RAVIKOVICH, N.N.; SIDEV, I. Ya.

Determining the stretching of knit goods under light loading.
Nauch.-issl. trudy VNIITP no. 5:45-52 '64 (MIRA 19:1)

PAVILLOV, I. F.

Moscow State Inst. of Epidemiology and Bacteriology, (-1944-)

"Efficiency of the Typhus Vaccine, after Clinical Data,"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., Nos. 7-8, 1944.

RAVIKOVICH, O.Ya.

Panting from heat in dogs at different ages. Biul.eksp.biol. i
med. 38 no.8:22-25 Ag '54. (MLRA 7:9)

1. Iz laboratorii vozrastnoy fiziologii (sav. prof. I.A.Arshavskiy)
Instituta obshchey i eksperimental'noy patologii (dir. akademik
A.D.Speranskiy) AMN SSSR, Moskva.

(HEAT, effects,

panting in dogs, age factors)

(RESPIRATION,

panting in dogs, eff. of heat, age factors)

YERMAKOV, P.V.; BAVIKOVICH, P.I.; FUKS, I.I.

Founding machine parts in shell molds. Tekst.prom. 16 no.5:50-52
My '56. (MLRA 9:8)
(Shell molding (Founding))

344 Formation and degradation of brown-red solonchic soils along the Mediterranean coast of Israel. S. Ravikovitch (Agr. Research Sta., Rehovot). *Klavin* 6, 8-15 (1956). Some of the soils are solonchic, some are degrading solonchic. It is assumed that in their formation the Na, characteristic of solonchic soils, was supplied to the exchange

complex by NaCl in rain, and by vegetation. The presence of large amts. of exchangeable Na and H relative to exchangeable Ca and Mg causes instability of the clay and its migration downwards. The total quantity and composition of the exchangeable cations vary widely; this affects the balance of elements available to plants. J. I. Willaman

RAVIKOVICH, S.

(11) Adsorption of sodium by soils from solutions of sodium salts. N. Binder-Barhava and S. Ravikovitch, *Kavim* 2-3, 37-50, 5-9 (1952); *Soils and Fertilizers, Commonwealth Bur. Soil Sci.* 16, 422 (1953).—Soils of NaCl, Na₂SO₄, and NaNO₃ of concn. range 0.3-12.2 meq./100 ml. were used with a Ca soil and 2 soils contg. Na at 14.1 and 30.1% of the cation-exchange capacity. Adsorption of Na increased with rising concn. of the solns. In general the SO₄ anion led to highest Na adsorption. Only at low Na concns. was lime effective in checking adsorption. Gypsum was far more effective and reduced adsorption even in highly concd. solns. In solonetz-type soils its action extended to displacement of exchangeable Na. Its use is recommended for improvement of such soils and for counteraction of salinization by brackish irrigation water. K.L.C.

BYKHOVSKIY, A. [Bykhovs'kiy, A.], kand.fiz.-matem.nauk; RAVIKOVICH, S.,
kand.fiz.-matem.nauk

Eye and colors. Nauka i zhyttia 12 no.9:25-26 S '62. (MIRA 16:1)
(Color sense)

GOLIK, O.Z.; RAVIKOVICH, S.D.

Structure and viscosity of binary solutions and mixtures.

Dop. AN URSR no.2:17-23 '49.

(MLRA 9:9)

1. Institut fizichnoi khimii im. L.V. Pisarshevs'kogo AN URSR.

Predstaviv diyeniy chlen AN URSR O.I. Brods'kiy.

(Viscosity) (Solution (Chemistry))

RAVIKOVICH, S. D.

USSR/Chemistry - Viscosity
Chemistry - Bonds

Jan 49

"A study of the Coefficient of Viscosity in Isomorphic Substances,"
A. Z. Golik, S. D. Ravikovich, Inst of Physicochem imeni L. V.
Pisarzhevskiy, Acad Sci, Ukrainian SSR, Kiev, 4 pp

"Zhur Fiz Khim" Vol XXIII, No 1 p. 86

Claims actual results can be achieved by analyzing coefficients of
viscosity of liquids which have the same molecular structure and
type of bond between particles. Conducted experiments on following:
paradichlorobenzene, paradibromo-benzene, naphthalene and anthracene.
Gives mathematical formulas, tables, and graphs of experimental
results. Submitted 23 Mar 48.

pa 48/49T30

PAVLOVICH, S. D.

20546 PAVLOVICH, S. D. Stroeniye i vyazkost' benarnykh rastvorov i smesey. Doklady
akad. nauk ukr. SSR, 1949, No. 2, s. 17-23.-Na ukr. yaz.-Rezyume na rus. yaz.

SO: LETCHIS ZHURNAL STAYEY, Vol. 38, Moskva - 1949

2

Structure and viscosity of binary solutions and mixtures.

A. Z. Odik and S. D. Raykhovich (Inst. Phys. Chem. Acad. Sci. Ukr. S.S.R.). *Deposited Acad. Nauk. Ukrainy*, N. S. K. 1989, 101-7 (in Ukrainian); cf. C.A. 66, 8721d. -- A relation is established between the viscosity η and the crit. temp. t_c of mints. of org. compds. of the same type. In mints. of $C_{12}H_{18}$ and $C_{14}H_{22}$, both η and t_c increase with the concn. of $C_{12}H_{18}$. Selected exptl. data of t_c and of η (temp. in parentheses) in atones, are: pure $C_{12}H_{18}$, $t_c = 234^\circ$, η (30.0) 0.00460, (40.0) 0.00518, (120.0) 0.00702; $C_{12}H_{18} + 33\% C_{14}H_{22}$, $t_c = 238^\circ$, η (18.0) 0.00551, (44.5) 0.00447, (90.5) 0.00345; $C_{12}H_{18} + 49\% C_{14}H_{22}$, $t_c = 267^\circ$, η (21.5) 0.00508, (68.5) 0.00400, (147.5) 0.00225; $C_{12}H_{18} + 60\%$

$C_{12}H_{18}$, $t_c = 274^\circ$, η (14.0) 0.00650, (75.0) 0.00897, (145.0) 0.00940; pure $C_{14}H_{22}$, $t_c = 295^\circ$, η (32.5) 0.00766, (75.0) 0.00821, (150.0) 0.00822. The compn. $C_{12}H_{18} + 60\% C_{14}H_{22}$ has the same t_c as pure $C_{14}H_{22}$; correspondingly, η is the same for the $C_{12}H_{18} + C_{14}H_{22}$ mint. and for pure $C_{14}H_{22}$ over the whole temp. range. For all compns., $\log \eta$ is a linear function of $(1/T)$, and the slope (activation energy) is the same for all compns. and for the pure components as well. Selected exptl. data for mints. of MeOH and BuOH are: pure MeOH, $t_c = 212^\circ$, η (20) 0.00770, (80) 0.00887, (160) 0.00930; MeOH + 33% BuOH, $t_c = 238^\circ$, η (18.5) 0.00774, (71.4) 0.00828, (110.6) 0.00884; MeOH + 50% BuOH, $t_c = 243^\circ$, η (24.0) 0.01450, (66.5) 0.00888, (108.0) 0.00470; MeOH + 66% BuOH, $t_c = 280^\circ$, η (26.0) 0.01088, (82.0) 0.00873, (118.0) 0.00432; MeOH + 83% BuOH, $t_c = 293^\circ$, η (21.6) 0.02718, (60.0) 0.01164, (113.4) 0.00889; BuOH, $t_c = 287^\circ$, η (20) 0.00888, (68.2) 0.01437, (120) 0.

0.00888. Pure EtOH, $t_c = 243^\circ$, η (30) 0.01563, (80) 0.00834, (160) 0.00834; EtOH + 50% BuOH, $t_c = 255^\circ$, η (23.0) 0.02107, (62.5) 0.01019, (110.0) 0.00880; EtOH + 60% BuOH, $t_c = 269^\circ$, η (24.0) 0.02886, (65.0) 0.01216, (110.6) 0.00888; pure BuOH, $t_c = 287^\circ$, η (20.0) 0.00888, (68.2) 0.01437, (120.0) 0.00488. The parallelism between η and t_c repeats itself in these systems. With the aid of plots, it is found that pure PrOH has the same t_c and the same η (at any temp.) as a mint. of the compn. 17% MeOH + BuOH or 32% EtOH + BuOH. Pure EtOH has the same t_c and η as a mint. 45% MeOH + BuOH. In both MeOH + BuOH and EtOH + BuOH, $\log \eta$ is a linear function of $(1/T)$ but the activation energies vary with the compn. In the system EtOH + $C_{12}H_{18}$, representative of a mint. of components of unlike type, selected data are: EtOH + 16% $C_{12}H_{18}$, $t_c = 248^\circ$, η (21.1) 0.01082, (78.9) 0.00476, (131.7) 0.00280; EtOH + 39.5% $C_{12}H_{18}$, $t_c = 255^\circ$, η (22.4) 0.00883, (61.0) 0.00884, (132.1) 0.00275; EtOH + 66% $C_{12}H_{18}$, $t_c = 270^\circ$, η (15.8) 0.00708, (74.0) 0.00889, (166.0) 0.00270; pure $C_{12}H_{18}$, $t_c = 234^\circ$, η (30.0) 0.00460, (40.0) 0.00518, (120.0) 0.00702. The curves of η for the mints. lie between those of the pure components, fanning out from a common high-temp. point of intersection.

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Structure and viscosity of binary liquid mixtures and solutions. A. Z. Gutik and S. I. Kuvshinov (Acad. Sci. Ukr. N.R.S., Kiev). *Zhur. Fiz. Khim.* 36, 524-N (1962); cf. C.A. 66, 6664i.—In mints. of similar liquids kinematic viscosity ν increases with temp. T . Naphthalene (I) has $T = 400^\circ$ and $\nu = 0.000, 0.001$, and 0.002 centistokes at 60, 200, and 300°. PhPh has $T = 320^\circ$ and $\nu = 1.004, 0.370$, and 0.000 at 73.5, 107.5, and 125°. A 20 mol. % soln. of PhPh in I has $T = 407^\circ$ and $\nu = 0.040$ and 0.000 at 60° and 200°. For 80% PhPh in I, $T = 515^\circ$, $\nu = 1.000$ and 0.370 at 60 and 215°. For 75% PhPh in I, $T = 500^\circ$, $\nu = 1.100$ and 0.201 at 60 and 205°. For PhCl, $T = 200.5^\circ$, $\nu = 0.657, 0.431$, and 0.201 at 18.6, 60, and 100.5°. For PhBr $T = 307^\circ$, $\nu = 0.601, 0.418$, and 0.207 at 21, 72, and 141.5°. For PhI $T = 440^\circ$, $\nu = 0.81, 0.46$, and 0.20 at 21, 61, and 140°. The mint. PhI 0.19, PhCl 0.81 mol. has $T = 307^\circ$, and its ν is almost identical with that of PhBr. For PhI 0.25, PhCl 0.75 and PhCl 0.25, PhI 0.75, T was 600 and 600°, resp., and ν was 0.000 at 14.5° and 0.707 at 10.0°, resp. When the 2 components are very different, the ν -temp. curves may intersect. This seems to be the case for PhI + EtOH. PhI has $T = 200.5^\circ$, $\nu = 0.651, 0.370$, and 0.000 at 20.4, 70.1, and 101°. EtOH has $T = 243.1^\circ$, $\nu = 1.576, 0.634$, and 0.233 at 21, 61, and 140°. The mints. contg. 33.7, 60.5, and 82 mol. % EtOH have $T = 207, 205$, and 240° , and $\nu = 0.675$ at 20.5°, 0.000 at 22.4°, and 1.000 at 21.1°, resp. Many other values of ν are given at intermediate temps. Khatilov's capillary viscometer (*Zhur. Khim. i Teori. i Fiz.* 6 (1928)) was used. J. J. Szwarcman

GOLIK, A.Z.; RAVIKOVICH, S.D.; ORISHCHENKO, A.V.

Viscosity and molecular structure of solutions. Ukr.khim.shur.17
no.5:627-657 '51. (MLRA 9:9)

1. Institut fizicheskoy khimii AN USSR.
(Solution (Chemistry)) (Viscosity)

RAVICOVICH, S. D.

USSR/Physics - Solid State Physics

Nov 53

"Conference on the Liquid State of Matter, Held 28-30 May 1953 at Kiev by the Academy of Sciences, Ukrainian SSR, and Kiev State University in T. G. Shevchenko," S. D. Ravikovich, G. F. Rozhchina and A. F. Skryshevskiy

Usp Fiz Nauk, Vol 51, No 3, pp 393-405

Summarize reports by the following: V. I. Danilov, on scattering of x-rays in liquids; A. F. Skryshevskiy, on x-ray study of solns of KOH, NaOH, LiOH, LiCl, and H_2SO_4 ; Ye. A. Foray-Koshits, on integral analysis of intensity curves; E. V. Deragin, Ye. G. Shvidkovskiy, C. Ya. Saroylov et al. on x-ray studies of liquid structure; A. Z. Golik, on characteristics of molecular structure of liquids; I. V. Radchenko, on modeling of liquids; F. K. Shestakovich, on new liquid models and influence of central and dipole forces on close ordering; A. Z. Golik and his associates S. D. Ravikovich, A. V. Orishchenko, V. F. Solomko, and M. A. Ryndich, on viscosity and density of matter in the liquid state; V. M. Chulanovskiy and D. S. Karenetskaya, on the influence of molecules' size and the intermolecular intensity on viscosity coeff; A. F. Frynza, on thermo-diffusion in binary systems; S. S. Urasovskiy, presence of grouping of identical atoms; A. R. Regel', on relation between electrical properties and structure of liquids; K. F. Vuks, on light-dispersion method for studying liquids' structure.

GOLIK, A.Z., doktor fiziko-matematicheskikh nauk, otvetstvennyy redaktor;
RAVNIKOVICH, S.D., kandidat fiziko-matematicheskikh nauk, redaktor;
ROSHCHINA, G.P., kandidat fiziko-matematicheskikh nauk, redaktor;
SKRYSHEVSKIY, A.F., kandidat fiziko-matematicheskikh nauk, redaktor.

[Structure and physical properties of matter in liquid state;
papers of a conference held in Kiev, May 28-30, 1953] Stroenie i
fizicheskie svoystva veshchestva v zhidkom sostoyanii; materialy
soveshchaniia, sostoiavshegosia v Kieve 28-30 maea 1953 g. [Kiev]
Izd-vo Kievskogo gor. univ. im. T.G.Shevchenko, 1954. 203 p.
(MLRA 9:8)

1. Akademiya nauk URSR, Kiyev
(Liquids)

GOLIK, O.Z.; SKRISHEVS'KIY, A.F.; RAVIKOVICH, S.D.

X-ray investigation of propyl and butyl alcohols. Dop. AN URSR no.5:
336-340 '54. (MLRA 8:7)

1. Institut fizichnoi khimii im. L.V. Pisarzhevs'kogo AN URSR.
Predstaviv diysniy chlen AN URSR O.I. Brods'kiy.
(Alcohols)

Ravikovich, S.D.

X-ray investigation of propanol and butanol. A. Z. Goll, A. P. Skryshevskii, and S. D. Ravikovich. *Doklady Akad. Nauk SSSR*, 1954, 550-551 (Russian summary).
The intensity curves of the x-ray dispersion, and the functions of the radial distribution of PrOH and BuOH were detd. Both radial dispersion curves have 2 max. The 1st one corresponds to the least intermol. spacing; the 2nd to the remaining intermol. spacing, and also to the OH spacings of the neighbor mols. The various possible structures of PrOH and BuOH are discussed in the light of the radial distribution functions obtained, and the conclusion is reached that a plane mol. structure of these alcs. agrees best with the results obtained. W. M. Sternberg

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GOLIK, O.Z.; SKRISHEVS'KIY, A.P.; RAVIKOVICH, S.D.

Reentgenographic investigation of methyl alcohol. Dep. AN URSR no.6:
457-459 '54. (MIRA 9:9)

1. Laboratoriya metalofiziki AN URSR, Institut fizicheskoi khimii imeni
L.V. Pisarzhevs'kego AN URSR. Predstaviv diyaniy chlen AN URSR O.I.
Bred's'kiy.
(Methanol) (X rays--Industrial applications)

RAVICH S D.

Viscosity as a function of the temperature. V. P.
Solomko and S. D. Ravich, *J. Appl. Chem. U.S.S.R.*
27, 605-7 (1954) (Engl. translation).—See *C.A.* 48, 11139d.
B. M. R.

Ravikovich, S. D.

AID P - 921

Subject : USSR/Chemistry
Card 1/1 Pub. 152 - 12/22
Authors : Solomko, V. P. and Ravikovich, S. D.
Title : Relation of the viscosity of liquids to temperature
Periodical : Zhur. prikl. khim., 27, no. 5, 546-548, 1954
Abstract : Critical review of papers published by D. A. Pospekhov
in Zhur. Prikl. Khim. in 1950 and 1952. One diagram,
10 references (5 Russian: 1949-1952).
Institution : None
Submitted : Ja 31, 1953

RAVIKOVICH, S. D. and SKRYSHEVSKIY, A. F.

"Roentgenographic Investigation of Normal Alcohols", a paper presented at the second conference on the Liquid State of Matter, Kiev, 30 May to 3 June 1955, Usp. Fiz. Nauk. April 1955

RAVIKOVICH, S. D., BARANOVSKIY, V. Ye. and SHIMANSKIY, Yu. I.

"Investigation of the Heats of Evaporation of Solutions", a paper presented
at the second conference on the Liquid State of Matter, Kiev, 30 May to 3 June 1955,
Usp. Fiz. April 1955

RAVIKOVICH, S.D.

Investigation of the latent heat of vaporization of liquids.
1. Compensating microcalorimeter for the measurement of the latent heat of vaporization. A. Z. Golik, S. D. Ravikovich, V. P. Solomko, and Yu. I. Shimans'kil. *Dokl. Akad. Nauk Ukr. R. S. R.* 1955, No. 2, 168-70 (Russian summary).
The calorimeter, having capillaries for the introduction of the solns. and the escape of the vapors and having a Pt-spiral heater, a thermocouple, and a stirrer, is placed in a Dewar flask through which H₂O from a thermostat is circulated. A fan stirs the air in the Dewar flask. The opposite end of the thermocouple is immersed in the thermostat so that the difference in the temp. is recorded. The evapn. of 8-10 ml. of the liquid is sufficient for a detn. II. A. Z. Golik, S. D. Ravikovich, Yu. I. Shimans'kil, and V. B. Baranovskii. *Ibid.* 271-2 (Russian summary).
The latent heat of evapn. L was detd. at 20-60° for the following solns.: (a) MeOH and EtOH in BuOH, (b) PhBr and PhI in PhCl, and (c) C₆H₁₂ and C₆H₁₄ in C₆H₁₄. L of (a) and (b) is a linear function of the concn. C . When expressed as kcal./mol. L is higher for liquids of higher crit. temp. t_c (cf. C.A. 46, 3211; 48, 4911); when expressed as cal./g. the reverse is true. Solns. of c show an anomaly in that the curve of L vs. C passes through a min. at about 20% C₆H₁₂; L is higher for liquids with higher t_c regardless of its units.

I. Bencowitz

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(30)

Ravikovich, S. D.

USSR/Atomic and Molecular Physics - Statistical Physics, Thermodynamics, D-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34364

Author: Golik, O. Z., Ravikovich, S. D., Shimans'kiy, Yu. I., Baranovs'kiy, V. Ye.

Institution: Institute of Physical Chemistry, Kiev State University

Title: Investigation of Latent Heat of Evaporation of Liquids. II. Investigation of Physical Solutions

Original Periodical: Dopovidi AN URSR, 1955, No 3, 271-273; Ukrainian; Russian
résumé

Abstract: It is shown that the temperature-dependence curves of latent heats of evaporation of solutions of methyl and ethyl alcohols in butyl alcohol, and of iodo-benzene and chlorobenzene in brombenzene, lie between the corresponding curves of the components and range in an order determined by the critical temperatures of the liquids. The concentration dependence of the heat of evaporation of solutions of alcohol and haloid derivatives of benzene is linear, and a pronounced minimum is disclosed for the C_6H_{14} and C_7H_{16} and C_8H_{18} solutions.

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BEZDENEZHNYKH, Ye.A.; VERNA, N.Ye.; IGNATOVICH, Yu.V.; RAVIKOVICH,
S.D.; CHERNYI, Ye.P.; ZHURAVLEV, V.A., red.; BOYKO, V.P.,
tekh. red.

[Laboratory manual in physics] Laboratornye raboty po fi-
zike. [By] E.A.Bezdenezhnykh i dr. Kiev, Gosmedizdat
USSR, 1963. 237 p. (MIRA 17:4)

*

RAVIKOVICH, S.D.

USER/ Chemistry - Physical chemistry

Card 1/2 Pub. 116 - 7/25

Authors : Golik, A. Z., and Ravikovich, S. D.

Title : Viscosity and structure of normal paraffins and their solutions in liquid state

Periodical : Ukr. khim. zhur. 21/1, 39-47, 1955

Abstract : The viscosity coefficient of pure paraffins and their binary and ternary solutions was investigated in connection with the molecular structure. It was found that paraffin molecules do not possess dipole moments, consequently, the reaction between them is determined by weak residual dispersion forces. Normal paraffins were observed to form a group characterized by an analogous function of atom orientation and identical type of intermolecular bond. The activation energy of the viscous flow of paraffin solutions was established to be a square

Institution : Acad. of Sc. Ukr-SSR, The L.V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted : January 29, 1954

Periodical : Ukr. khim. zhur. 21/1, 39-47, 1955

Card 2/2 : Pub. 116 - 7/25

Abstract : function of the concentration. Solutions and pure paraffins have shown an identical viscosity coefficient at all temperature intervals of the liquid phase. Six references : 5 USSR and 1 USA (1939-1949). Tables; graphs; drawings.

Ravikovich, S. D.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 116 - 5/24

Authors : Golik, A. Z.; Ravikovich, S. D.; and Orishchenko, A. V.

Title : Viscosity and molecular structure of normal alcohols and their solutions

Periodical : Ukr. khim. zhur. 21/2, 167-175, 1955

Abstract : Data are presented on the density, viscosity and critical temperatures of normal alcohols and their solutions in connection with the molecular structure. It is shown that the activation energy of the viscous flow and the pre-exponential multiple factor are the functions of concentration; the activation energy increases and the pre-exponential multiple factor decreases with the increase in concentration of the component which possesses a higher critical temperature. Data regarding the critical temperatures and viscosity of binary and ternary alcohol solutions are included. Eight USSR references (1937-1952). Tables; graphs; drawing.

Institution : Acad. of Sc., Ukr. SSR, The L. V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted : January 29, 1954

RAVIKOVICH, S. D.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 116 - 7/30

Authors : Golik, A. Z.; Orishchenko, A. V.; Ravikovich, S. D.; Solomko, V. P.; Roshchina, G. P.; and Shimanskiy, Yu. I.

Title : Viscosity, density and critical temperatures of alcohol solutions in monocarboxylic acids

Periodical : Ukr. khim. zhur. 21/3, 312-326, June 1955

Abstract : The viscosity, density and critical temperatures of alcohol solutions were investigated in monocarboxylic acids in which the chemical esterification reaction usually takes place. The general laws governing the concentration and thermal dependence of the characteristics mentioned and the laws governing the activation energy of the viscous flow and specific volumes were established. It is shown that in the case of solutions, the components of which react intensively between themselves, and that the concentration and thermal dependences are also subject to other more complicated laws. Nine Russian and USSR references (1877-1955). Graphs.

Institution : Acad. of Sc., Ukr. SSR., The L. V. Pisarzhevskiy Inst. of Phys. Chem. and the T. G. Shevchenko State Univ., Kiev

Submitted : December 16, 1954

Ravikovich, S. D.

✓ Viscosities and critical temperatures of aqueous solutions of alcohols and monocarboxylic acids. A. Z. Golik, A. V. Orishchenko, S. D. Ravikovich, G. P. Roshchina, V. P. Solomko, and Yu. I. Shimauskii (T. G. Shevchenko State Univ., Kiev). *Ukrain. Khim. Zhur.* 21, 480-3 (1955) (in Russian); cf. C.A. 48, 4911e. Crit. temp. varies linearly with percentage of H₂O for EtOH, PrOH, and HOAc solns. For PrCO₂H solns. there is a min. at 25% H₂O. Viscosity-concn. curves show max. that decrease with rising temps. as H-bonded structures are broken down. Graphs are given. Graphs are also given for A and B/R in the equation $\text{viscosity} = A \exp(B/RT)$ against percentage H₂O. B/R has a max. and A a min. John H. Scott

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RAVIKOVICH, S.D.

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✓Viscosity and critical-temperature determinations of ~~ter-~~
~~nary solutions of alcohols-acids-water~~. A. Z. Golik, A.
V. Orishchenko, S. D. Ravikovich, V. P. Solomko, and Yu.
I. Shimanskii (I. G. Shevchenko State Univ., Kiev).
Ukrain Khim. Zhur. 21, 870-88 (1955) (in Russian); cf.
C.A. 50, 4592c.—The viscosity and crit. temps. of water,
EtOH, PrOH, AcOH, and butyric acid were studied. The
viscosity isotherms in each system intersect in such a way
that up to one concn. one isotherm lies above the other two,
and at higher concn. is located below. At a given temp.,
different concns. of the same components have the same
viscosities. The no. of such solns. reaches 5 for the water-
butyric acid-propanol system. W. M. Sternberg

PM

RAVNIKOVICH, S.D.
POSPEKHOV, D.A.

Answer to the critical note of V.P.Solomko, and S.D.Ravikovich.
Zhur. prikl. khim. 28 no.4:445-447 Ap '55. (ML 8:7)
(Chemistry, Organic) (Solomko, V.P.) (Ravikovich, S.D.)

RAVIKOVICH, S. D.

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60967

Author: Shimanskiy, Yu. I., Ravikovich, S. D.

Institution: None

Title: On the Use of F-Scale for Representation of Temperature Dependence of the Viscosity of Liquids

Original
Periodical: Zh. fiz. khimii, 1955, 29, No 1, 48-50

Abstract: On analyzing the method of rendering rectilinear the temperature dependence of the viscosity of liquids by means of the functional scale (F-scale, Referat Zhur - Khimiya, 1954, 28539) the authors reach the conclusion that use of the F-scale for rendering rectilinear the temperature dependence curves of dynamic and kinematic viscosity will yield positive results within the groups of liquids having similar molecular structure. They are noted the following advantages of the F-scale method over that of rectification in the coordinates $\ln \eta - 1/T$: greater accuracy in distribution of the

Card 1/2

Inst. Phys Chem in L. V. Piskunovskiy, AS. Ukr SSR.

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gasea, B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60967

Abstract: points along a straight line and omission of the assumption of an exponential correlation between viscosity and temperature. This reported that the F-scale method is applicable for rendering rectilinear the temperature dependence curves of the viscosity of pure liquids as well as of binary solutions.

Card 2/2

RAVIKOVICH, S. D.

Molecular structure and heat of evaporation of liquids.
 S. D. RaviKovich (O. O. Bogomolets Med. Inst., Kiev).
 Dokl. Akad. Nauk. 2, 151-5 (1957).—By investigating the
 latent heats of evapn. of EtOH, PrOH, and mixts. of MeOH
 with BuOH, of BuOH with EtOH, a regularity was dis-
 covered, that the free vols. of the various liquids must be
 identical, if the various curves, which show the heat of evapn.
 as a function of the temp., shall coincide with each other.
 The vol. function was found which enters into the equation
 where the heat of evapn. is expressed as a function of the d.
 The temp. functions of the heats of evapn. are used to calc.
 the critical temps. of the liquids employed.

Werner, J. G. 3

RAVIKOVICH, S.D.

21-4-2/24

AUTHOR: Ravikovich, S.D.

TITLE: Molecular Structure and Density of Organic Liquids (Molekulyarna struktura i hustyna orhanichnykh ridyn)

PERIODICAL: Dopovidi Akademii Nauk Ukraini'koi RSR, 1957. #4, pp 328-330 (USSR)

ABSTRACT:

The problem of describing macroscopic physical properties of liquids by means of molecular microstructure terms is discussed. The latter is characterized by the coordinate number, radius of the first coordinate sphere and a parameter connected with intermolecular interaction.

Eliminating the latter parameter, the author derives the following formula expressing the density of a liquid in terms of molecular structure:

$$\rho = \frac{3(z+1)M m_H}{4\pi R_z^3}$$

where: z - is the coordinate number,
 M - is molecular weight,
 m_H - is mass of the hydrogen atom
 R_z - is the radius of the first coordinate sphere.

Card 1/2

TITLE:

21-4-2/24
Molecular Structure and Density of Organic Liquids (Molekulyarna struktura i hustyna orhanichnykh ridyn)

The theoretical values of densities for 9 liquids, for which X-ray data are available, agree well with experimental results obtained.

Conversely, the value of coordinate number can be calculated from the known value of density.

The article contains 2 tables.

There are 12 references, 5 of which are Slavic

INSTITUTION: Kiyev Medical Institute

PRESENTED BY: Brods'kyy, A.I., Member of the Ukrainian Academy of Sciences.

SUBMITTED: 3 December 1956

AVAILABLE: At the Library of Congress

Card 2/2

BIRINBOYM, S.M., kand.khimicheskikh nauk; RAVIKOVICH, S.D., kand.fiziko-
matematicheskikh nauk

Some problems of the constitution of matter in the light of
F.Engels' works. Nek.filos.vop.med.i est. no.2:195-214 '60.
(MIRA 15:7)

1. Kafedra obshchey khimii i kafedra fiziki Kiyevskogo meditsinskogo
instituta imeni Bogomol'tsa.
(Matter--Constitution) (Engels, Friedrich, 1820-1895)

BEZDENEZHNYKH, Ye.A.; RAVIKOVICH, S.D., kand.fiziko-matematicheskikh nauk

Some problems of physics and their significance for medicine. Nek.
filos.vop.med.i est. no.2:159-167 '60. (MIRA 15:7)

1. Kafedra fiziki Kiyevskogo meditsinskogo instituta imeni Bogomol'tsa.
(PHYSICS—PHILOSOPHY) (MEDICINE—PHILOSOPHY)

SHKABARA, Ye.A., kand. tekhnuk; ZAVILYANSKIY, I.Ya., kand. med. nauk;
RAVIKOVICH, S.D., kand. fiz.-mat.nauk; RASIN, S.D., doktor med.
nauk, otv.red.; TUBOLEVA, M.V., red.; MATVIICHUK, A.A., tekhn.red.

[Cybernetics and the brain] Kibernetika i mozg. Kiev, 1961.
52 p. (Obshchestvo po rasprostraneniю politicheskikh i nauch-
nykh znaniі Ukrainskoi SSR. Ser.6, no.23) (MIRA 15:1)
(Cybernetics)

SHTOKALO, I.Z.; PYASKOVSKIY, B.V. [Piaskovs'kyi, B.V.]; RAVIKOVICH, S.D.
[Ravikovych, S.D.]

"Lenin and modern physics" by V.Hott. Reviewed by I.Z.Shtokalo,
B.V.Piaskovs'kyi, S.B.Ravikovych. Dop.AN URSR no.11:1572-1575 '60.
(MIRA 13:11)

(Physics--Philosophy) (Lenin, Vladimir Il'ich, 1870-1924)
(Hott, V.)

Academy nauk SSSR

PHASE I BOOK EXPIRATION NOV/186

Strojeniya veshcheiya i spektroskopiya (Structure of Matter and Spectroscopy) Moscow, Izd-vo AN SSSR, 1960. 113 p. Extra slip inserted. 2,300 copies printed.

Ed.: E. V. Astashev. Professor: Tech. Ed.: T. P. Polonova.

PURPOSE: This collection of articles is intended for physicists and chemists interested in spectroscopic methods of research on the structure of molecules and related problems.

CONTENTS: The articles contained in this collection were taken from the editorial files of the Zhurnal Fizicheskoy Khimii (Journal of Physical Chemistry) and are concerned with spectroscopic methods in research on the structure of molecules, the hydrogen bond, isotopic effects, problems in magnetochemistry, the structure of aqueous solutions of electrolytes, and the chemistry of complex compounds. References to secondary individual articles.

The author thanks the following for having participated in determining the density of aqueous compounds: V. D. Golov, P. N. Nikolayev, V. I. Kuchersky, N. S. Zhuravlev, V. I. Murzin, and L. S. Zhilkin. He thanks A. I. Brodskiy for his discussion of the results.

Author: A. M. and N. B. Alshuler (Novosibirsk Polytechnical Institute, Institute of Chemistry, Novosibirsk Polytechnical Institute). Problem of change in the structure of polyethylene at phase-transition extension 69

Author: I. B. V. N. Golov, Ye. I. Nikolova, I. D. Pavlovskaya, and V. N. Shilov (Novosibirsk Polytechnical Institute, Institute of Chemistry, Novosibirsk Polytechnical Institute). Isotopic effect on the viscosity of isopropylalcohol 73

Author: N. I. V. N. Yegorov, and V. V. Pashko. Investigation of surface tension of liquid metal solutions. I. Surface tension of a lead-silver system 78

Author: I. I. Coordination Equilibrium of Nickel Ions in $K_2O-P_2O_5-SiO_2$ System Glasses 84

Author: V. A. [Institute Khimii silikatov (Institute of the Chemistry of Silicates)]. Structure of Spontaneous Glass 93

V. I. Averbach is thanked for having plotted the curves for α - and β -spontaneous and for the crystallization product of spontaneous glass. 96

Author: I. N. Kolesova and B. Ye. Samoilov. Calculation of excess x-electron magnetic susceptibility of certain molecules containing the six-member carbon ring with the aid of the Free Electron Model 102

The author thanks I. N. Kolesova and B. Ye. Samoilov for the numerical calculations, and Ye. N. Gur'yanova and N. N. Aliev for their suggestions. 102

Author: O. Ya. and M. N. Balysova (Institute Obshchey i neorganicheskoy khimii im. V. I. Lur'inskogo (Institute of General and Inorganic Chemistry named after V. I. Lur'inskogo)). Temperature Dependence of Coordination Numbers of Alkali Metal Cations in Aqueous Solutions 102

Author: O. A. [Institute Khimii silikatov (Institute of the Chemistry of Silicates)]. 102

Author: N. N. Kopylov (Institute Khimii silikatov (Institute of the Chemistry of Silicates)). Form of Surface Tension Isoterm 111

AVAILABLE: Library of Congress

Card 6/6

10-20-60

SOV/21-58-2-22/29

AUTHORS: Golik, A.Z., Ravikovich, S.D., Baranovskiy, V.Ye.

TITLE: The Investigation of Evaporation Heats of Solutions of Some Deuterium Compounds (Issledovaniye teplot ispareniya rastvorov nekotorykh deyterosoyedineniy)

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1958, Nr 2, pp 210-212 (USSR)

ABSTRACT: The authors investigated the evaporation heat of heavy water solutions in ordinary water and of deuterium-butanol in butanol. It is shown that in the first case the concentration dependence of the evaporation heat has a clear-cut maximum at 40°C, and in the second case it degenerates into an S-shaped curve. The regularities observed indicate the complicated nature of intermolecular interaction. Hence the authors draw the conclusion that the conception of an "ideal" solution as a standard pattern for comparing different solutions is not applicable.

Card 1/2 There are 2 graphs, and 7 references, 3 of which are Soviet, 2 English, 1 German and 1 American.

SOV/21-58-2-22/28

The Investigation of Evaporation Heats of Solutions of Some Deuterium Compounds

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)
Kiyevskiy meditsinskiy institut (Kiyev Medical Institute)

PRESENTED: By Member of the AS UkrSSR, A.I. Brodskiy

SUBMITTED: May 9, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

RAVIKOVICH, S.D.; SOLOMKO, V.P.

Investigation of the viscosity and critical temperatures of
certain deuterium compounds and their solutions. Ukr. khim.
zhur. 24 no.1:7-12 '58. (MIRA 11:4)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko 1
Kiyevskiy meditsinskiy institut im. A.A. Bogomol'tsa.
(Viscosity) (Deuterium compounds)

RAVICH, S.D.

USSR/Physical Chemistry - Liquids, Amorphous Bodies, Gases.

B-6

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 293

Author : S.D. Ravikovich.

Inst :

Title : Moleculare Structure and Heat of Evaporation of Liquids.

Orig Pub : Ukr. fiz. zh., 1956, 2, No 2, 191-195

Abstract : It is shown that the condition of coincidence of curves of temperature dependence of evaporation heat is the equality of free volumes of different liquids. Based on the relation among the density ρ of the solution, the concentration c and the density of the components $\rho = \rho_1 \rho_2 / [\rho_1 + c(\rho_1 - \rho_2)]$, the following equation is derived:
 $L = \text{const} \cdot T \cdot \rho^2 f(v, c)$, where L is the heat of evaporation and $f(v, c) = (v_2^2 / v_1^2) \cdot (\frac{1}{2} c \cdot 1 - v_1/v_2)$. It is shown that the critical temperature is connected with the heat of evaporation at two temperatures by the relation

Card 1/2

RAVIKOVICH, S.D. [Ravikovich, S.D.]

Molecular structure and density of organic liquids [with summary
in English]. Dop. AN URSR. no.4:328-330 '57. (MIRA 11:3)

1. Kiivs'kiy medichniy institut. Predstavleno akademikom AN URSR
A.I. Brodskim [O.I. Brodskiy].
(Liquids--Density)

Bl

B-III

Brown-red sandy soils of the Shoran and of the Shekela.
S. Navikovitch (Kiev, 1930, I, 1-12; *Soil & Fert.* 1931, 14, 421). These soils are poor in essential plant nutrients, especially org. matter, N, and P. K is present in comparatively large quantities. Lime deficiency is one of the factors promoting soil degradation. Soil pH is usually 6.5-7.5. Salinity in irrigated areas presents no problem. Exchange capacity is low. Citrus is the chief crop. Liming and the use of fertilizers in irrigation-water are recommended as means of maintaining the stability of these soils.

C. H. NORTH

RAVITKOVICH, S. M.

30(4) PHASE I BOOK EXPLOITATION 507/2799
Moscow. Publichnaya biblioteka. Nauchno-metodicheskii kabinet
vedeniya

Nauchno-tekhnicheskiye znaniya v nazy: sbornik materialov v
pomoshch' massovym bibliotekam (Scientific and Technical
Knowledge for Everyone. Collection of Materials for the
Aid of Public Libraries) Moscow, 1956. 196 p. Irrata
slip inserted. 15,000 copies printed.

Compilers: G. S. Multanovskaya and V. V. Boyman; Ed. i. P.
Vagrodina, Candidate of Pedagogical Sciences; Tech. Ed. i.
L. M. Enelenskaya.

PURPOSE: This book is intended for librarians.

COVERAGE: This collection of articles reviews popular
scientific and technical literature to aid public library
workers in disseminating science information to the reading
public. The role and significance of principal industries
in the technological development of the USSR are covered.
The last two articles describe the experience of individual
libraries in promoting popular-science books. The appendix
gives a list of bibliographic aids for popular-science
literature. No personalities are mentioned.

Multanovskaya, G. S. Automatic Machines as Aids to Human
Labor 98

Boyman, V. V. Chemistry Around Us 109

Boyman, V. V. Atomic Energy for the Welfare of the Nation 119

G. S. Irmova, S. M. Industry for Agriculture. Materials for
an Evening Devoted to Books 131

Manashcheyva, M. S. Propagation of Economic Knowledge
Among Readers 143

Yankelovich, Ye. I., and S. M. Raviyevich. Experience
in Disseminating Scientific and Popular Literature by
the Zagorsk Library in Moscow Oblast 160

Zlotnikov, V. G. Natural Sciences as an Aid to Collective
Farming. (From the work experience of the Malyye
Bytishchi Rural Library of Moscow Oblast) 175

Appendix: List of Bibliographic Aids 193

AVAILABLE: Library of Congress (27911 .M58)

Card 4/4

Ja/mah
1-6-60

S/080/61/034/006/003/020
D247/D305

AUTHORS: Lozovoy, A.V., Muselevich, D.L., Ravikovich, T.M.,
Senyavin, S.A., and Cherkasova, V.F.

TITLE: Hydrogen catalysts based on an alum in an osilicate
base

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 6, 1961,
1200 - 1208

TEXT: In the present work an attempt has been made to produce a catalyst for the hydrogenation of coals and tars in the production of higher aromatic benzenes. The investigations were concerned mainly with finding a suitable natural alum in osilicate, synthesizing a catalyst of a complex character capable of converting in a single stage, in the vapor phase, unrefined, high-boiling and coal distillates containing oxygen, nitrogen and sulphur compounds into higher aromatic hydrocarbons boiling within 170-200°C, and investigating the stability of such catalysts on prolonged working

Card 1/5

↓

S/080/61/034/006/003/020
D247/D305

Hydrogen catalysts based on ...

under a pressure of 300 atm. From many natural alum in osilicates tested "askanite", H_2SO_4 - activated Askansk clay, was found to provide a base for the most active catalyst. The normal procedure of preparing the catalysts involved intimately mixing the askanite, water, CrO_3 and aq. HF , followed by the addition of tungstic acid, zinc oxide, sulphur and compounds of molybdenum, venedium and nickel as required. After drying, the mass was crushed, sieved and formed into tablets. Activation was carried out by heating to $450^{\circ}C$ in a stream of hydrogen or hydrogen/hydrogen sulphide. Activity of the prepared catalyst was then determined from the yields and compositions of the hydrogenation products. The results obtained, using five of the most interesting alum in osilicate catalysts, are given in Table 1, which also includes a technical alum in o-molybdenum catalyst.

Table 1. Composition and comparative activity of aluminosilicate catalysts under autoclave conditions ($510^{\circ}C$, initial hydrogen pressure 130 atm, time = 20 min. Quantity of catalyst = 10 %).

Card 2/5

Hydrogen catalysts based on ...

S/080/61/034/006/003/020
D247/D305

Table 1. (cont'd) Состав и сравнительная активность алюмосиликатных катализаторов в условиях автоклавных опытов (510°, начальное давление водорода 130 ат, длительность 20 минут) Количество катализатора 100%

③ катализаторы	① Для приготовления катализатора взято (вес. %)										② выход (вес. % от сырья)		⑤ количество проката в реакторе (атм. %)
	④ асфонита	⑤ 40%-й плавн.-новой кислоты	⑥ S	⑦ W	⑧ Mo	⑨ V	⑩ Zn	⑪ Ni	⑫ Cr	⑬ продукт с температурой кипения 175°	⑭ газа + жидкости		
32	70.6	10.9	10.9	—	—	—	—	7.6	—	29.9	33.7	71.1	
11	69.0	10.5	6.1	—	—	—	5.4	7.3	2.7	27.5	35.1	77.5	
38	71.7	10.8	6.0	—	—	3.0	5.7	—	2.8	28.6	28.6	69.2	
26	72.0	11.0	6.1	—	2.2	—	5.8	—	2.9	33.4	31.3	77.5	
345	71.4	10.7	6.0	3.3	—	—	5.8	—	2.8	43.1	27.7	64.1	
7360	—	—	—	—	—	—	—	—	—	36.1	36.1	61.2	

Legend: 1 - Catalyst prepared from (weight %); 2 - yield (weight % based on raw material); 3 - no. of catalyst; 4 - askonite; 5 - 40 % hydrofluoric acid; 6 - 12 - (as indicated); 13 - product of

Card 3/5

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D247/D305

Hydrogen catalysts based on ...

hydrogenation boiling up to 175°C; 14 - gas + losses; 15 - quantity of aromatic hydrocarbons in the product of hydrogenation (weight %); 16 - *Catalyst composition: Al_2O_3 76.05 %; MoO_3 14.77 % (Mo 9.85 %); Fe_2O_3 0.59 % (Fe 0.41 %); H_2O bound + 8.59 %; time of experiment = 15 min.

Further experiments were conducted in a continuous flow apparatus at 480-520°C and 300 atm. over a period of 6-10 hrs. Under those conditions catalyst No. 345 was found to exhibit the highest activity. Investigations of activity and stability of the catalyst No. 345 were also conducted in a continuous hydrogenation plant at a temperature of 510°C and a pressure of 300 atm; over 97 hrs. runs. For velocities equal to 1, the average yield of the product of hydrogenation was 82 %, including 50 % of the fraction boiling up to 170°C and containing 53 % of aromatic hydrocarbons. After 97 hrs. of operation the catalyst was found to lose some of its activity, which could not be restored by enrichment with sulphur. It has been

Card 4/5

Hydrogen catalysts based on ...

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D247/D305

deduced, therefore, that a hydrogen pressure of the order of 300 atm is insufficient to prevent deactivation of the catalyst used for the hydrogenation of coal tar derivatives. There are 4 tables and 19 references: 10 Soviet-bloc and 9 non-Soviet-bloc. The references to the four most recent English-language publications read as follows: M.G. Pelipetz, L.V. Frank, H.H. Ginsberg, M.L. Wolfson, E.L. Clark, Ch. Eng. Progress, 50, 626-628, 1954; M.L. Wolfson, M.G. Pelipetz, A.D. Demick, E.L. Clark, Ind. Eng. Chem. 43, 536-540, 1951; I.G. Ciapetta, J.B. Hunter, Ind. Eng. Chem. 45, 147, 155, 1953; I.G. Ciapetta, Ind. Eng. Chem. 45, 159, 162, 1953.

ASSOCIATION: Institut goryuchikh iskopayemykh AN SSSR (Institute of Mineral Fuels AS USSR)

SUBMITTED: September 19, 1960

Card 5/5

KRICHKO, A.A.; LOZOVY, A.V.; MEZHIMNOVA, A.I.; PAL'CHIKOV, G.F.;
STEPHNO, S.I.; TITOVA, T.A.; Prinizhala uchastiye RAVIKOVICH, T.M.

Production of phenanthrene from the low-sulfur gas oils from
catalytic cracking. Khim. i tekhn. topl. i masel 10 no.12:
10-14 D '69. (MIRA 19:1)

1. Institut goryuchikh iskopayemykh, Moskva i Ob'yedineniye
"Grozneftekhimzavody".

KRICHKO, A.A.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; TITOVA, T.A.; Primali
uchastiye: CHERKASOVA, V.F.; RAVIKOVICH, T.M.

Hydrogenation of aromatized petroleum crude without catalysts
for obtaining naphthalene and other products. Neftper. i nefte-
khim. no.9:30-33 '63. (MIRA 17:8)

1. Groznenskiy kreking-zavod, Groznenskoye upravleniye neftepere-
rabatyvayushchey i neftekhimicheskoy promyshlennosti i Institut
goryuchikh iskopayemykh.

KRICHKO, A.A.; LOZOVY, A.V.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; RAVIKOVICH, T.M.; TITOVA, T.A.; CHERKASOVA, V.F.; Primali uchastiye: MUSELEVICH, D.L.; SOVETOVA, L.S.; TSITRON, I.L.

Obtaining naphthalene from straight-run fractions of the Anastasiyevska petroleum. Neftoper. i neftekhim. no.10:3-8 '63. (MIRA 17:2)

1. Institut goryuchikh iskopayemykh AN SSSR, Groznenskiy kreking-zavod i Upravleniye neftepererabatyvayushchey i neftekhimicheskoy promyshlennosti.

S/846/62/017/000/001/002
EO71/E135

AUTHORS: Lozovoy, A.V., Muselevich, D.L., Ravikovich, T.M.,
Titova, T.A., and Cherkasova, V.F.

TITLE: A two-stage scheme for the production of chemical products by hydrogenation of tar from the Cheremkov coals

SOURCE: Akademiya nauk SSSR. Institut goryuchikh iskopayemykh. Trudy. v.17, 1962. Khimicheskaya i termicheskaya pererabotka topliva. 174-181.

TEXT: This is a continuation of the previously published work in which the possibility of production of various compounds and semiproducts from the tar produced by semicoking of the above coals was demonstrated; namely, that by liquid phase (at 300-500 atm) and high temperature vapour phase (at 75 atm) hydrogenation, 31-37% of various chemicals, 37-51% of a high quality motor fuel and 18-25% of gases (C_nH_{2n+2} ; $C_1 - C_4$) can be obtained. In the present work a gaseous phase hydrogenation directed towards the production of chemical products instead of motor fuel was carried

Card 1/3

A two-stage scheme for the production... S/846/62/017/000/001/002
E071/E135

out in a 3 litre laboratory reactor. Liquid phase hydrogenation products of the tar boiling up to 300 °C, obtained under works' conditions, were used as a starting material. Phenols and a major part of nitrogenous bases were removed before the processing. The hydroaromatisation was carried out at 75 atm, hydrogen supply of 5.5 moles per mole of the raw material, and a temperature of 510 °C in the presence of a technical catalyst $\text{MoO}_3 + \text{Al}_2\text{O}_3$, at a volume velocity of 0.7-0.75 kg/l/hr. Operating period: 100 hours with one stop after 67 hours (without regeneration of the catalyst). According to composition and yield analyses the activity of the catalyst remained approximately the same throughout the operating period; 71-74% of liquid hydrogenated products, 3.5-4% of water and 23-25% of gaseous hydrocarbons ($\text{C}_n\text{H}_{2n+2}$, $\text{C}_1 - \text{C}_4$) were obtained.

A high degree of aromatisation (86.7% of aromatics, including 38.1% of monocyclic and 48.6% bicyclic and condensed and 13.3% of naphthenic and paraffinic hydrocarbons) was achieved. Over 82% of the liquid products boils below 250 °C; this fraction does not require a further hydrogenating treatment and represents a

Card 2/3

A two-stage scheme for the production... S/846/62/017/000/001/002
E071/E135

finished raw material for the separation of aromatic hydrocarbons;
the residue boiling above 250 °C must be returned to hydrogenation.
By a two stage hydrogenation treatment of the tar combined with a
preliminary separation of phenols (C₆ - C₈) and bases and with
other processes, 62-66% of valuable chemical compounds and
semiproducts (aromatic hydrocarbons C₆ - C₈, phenols C₆ - C₈,
naphthalene, monomethylnaphthalenes, solvents, etc), 33-37% of
gases C_nH_{2n+2} can be obtained with a hydrogen consumption of
5.7-6.0% on the weight of the tar.
There are 1 figure and 2 tables.

Card 3/3

S/846/62/017/000/002/002
E075/E135

AUTHORS: Lozovoy, A.V., Muselevich, D.L., Ravikovich, T.M.,
Senyavin, S.A., Titova, T.A., and Cherkasova, V.F.

TITLE: Silica-alumina based catalysts for high hydrogen
pressure hydrogenation

SOURCE: Akademiya nauk SSSR, Institut goryuchikh iskopayemykh.
Trudy. v.17. 1962. Khimicheskaya i termicheskaya
pererabotka topliva. 199-211.

TEXT: Silica-alumina catalysts activated with HF and
described previously (A.V. Lozovoy, D.L. Muselevich, T.M. Raviko-
vich, S.A. Senyavin and V.F. Cherkasova, Zh P Kh, 34, 1200 (1961))
have insufficient stability at 300 atm and 500-510 °C during
hydrogenation of coal tar oils. The authors therefore investigated
the activity and stability of the catalysts at 600 atm and
470-505 °C during hydrogenation of coal tar oils from which the
most valuable phenols and N-compounds were previously extracted.
The new catalysts were based on HF treated silica-alumina with the
addition of a few percent of oxides and sulphides of Cr, Zn, Fe,
Ni, and traces of W or Mo. The activity of the catalysts was

Card 1/2

Silica-alumina based catalysts for high... S/846/62/017/000/002/002
E075/E135

investigated in continuous vapour phase hydrogenation. Most of the new catalysts were found to be highly active and superior to such industrial catalysts as WS_2 - silica alumina (no.6434), $MoO_3-Al_2O_3$ (no.7360) and K-536 type catalyst. The most active was catalyst no.66 - askanit (Askan clay) activated with HF (73.35%) containing oxides and sulphides of Cr (2.9%), W (0.75%), Zn (5.9%). Hydrogenation of coal tar using this catalyst was carried out for 3 to 4 hours under 600 atm and at 501-505 °C. The liquid products contained predominantly aromatic hydrocarbons, and the gaseous products - ethane and butanes. The advantages of catalyst no.66 are: 1) its complexity of action permitting use of one catalyst in place of the three used previously (WS_2 , $WS_2 + silica-alumina$, $MoO_3 + Al_2O_3$) and one hydrogenation stage in place of three stages previously, i.e. preliminary hydrogenation, reforming and dehydrogenation under pressure; 2) possibility of direct processing of coal tar products; 3) high space velocity of the hydrogenation - 1.5 to 2.0 in place of 0.5-0.7 used previously; 4) small content of expensive W (0.75%) and exclusion of Mo. There are 1 figure and 5 tables.

Card 2/2

LOZOVY, A.V.; MUSELEVICH, D.L.; RAVIKOVICH, T.M.; SENYAVIN, S.A.; TITOVA, T.A.;
CHERKASOVA, V.F.; Prinimali uchastiye: DEMBOVSKAYA, Ye.A.;
ZAKHARENKO, V.A.; L'VOVA, L.N.; MARKINA, T.I.

Hydrogenation catalysts on an aluminosilicate base. *Zhur.prikl.khim.*
34 no.10:2295-2302 0 '61. (MIRA 14:11)
(Hydrogenation) (Catalysts)

BLONSKAYA, A.I.; LOZOVY, A.V.; MUSELEVICH, D.L.; RAVIKOVICH, T.M.;
TITOVA, T.A.

Two-stage layout for the hydrogenation manufacture of intermediate chemical products, motor fuels, and gases from tars of Cherepkhovo coals. Trudy IGI 9:5-14 '59. (MIRA 13:1)
(Fuel) (Coal tar)

KRICHKO, A.A.; LOZOVY, A.V.; TITOVA, T.T.; Prinimali uchastiye:
RAVIKOVICH, T.M.; CHERKASOVA, V.F.

Role of water vapor in the production of naphthalene from
petroleum raw stock. Nefteper. i neftekhim. no.11:18-21 '64
(MIRA 18:2)

GERSHKOVICH, V.I.; MARDVSKIY, Yu.A.; RAVIKOVICH, V.A.

Flotation of coal in salt solutions. Koks i khim. no. 4:7-10 '58.
(Flotation) (Coal preparation) (MIRA 11:4)

68-56-4-3/21

AUTHORS: Gershkovich, V. L., Makovskiy, Yu. A. and Ravikovich, V.A.

TITLE: Flotation of Coals in Salt Solutions (Flotatsiya ugley v solyanykh rastvorakh)

PERIODICAL: Koks i Khimiya, 1958, Nr 4, pp 7-10 (USSR)

ABSTRACT: This is a contribution to a previously published paper by M. G. Yel'yashevich (Koks i Khimiya, 1956, Nr 7). The present authors consider that the results of laboratory flotations of coals in solutions of inorganic salts as well as the whole paper are insufficiently convincing and that the proposed conditions for an industrial flotation were never checked and cannot be considered as optimal. Some results of an experimental laboratory and industrial work carried out by Lengiproshakht are given in Tables 1 and 2. It is shown that on flotation in salt solutions the ash content of concentrates and the duration of the flotation decreased. It is stated that Lengiproshakht is planning further work in this field on various coal washeries of the country when flotation shops will be transferred for long

Flotation of Coals in Salt Solutions

68-58-4-3/21

periods to salt flotation. This will permit the final settlement of the economic advantages of the process. There are 2 tables.

ASSOCIATION: Lengiproshakht

1. Coal--Flotation
2. Salt solutions--Performance

Card 2/2

RAVIKOVICH, V.M.

Session in Andizhan concerning the gas and oil potentials
of the Fergana Valley. Uzb. khim. zhur. no.2:85-86 '59.

(MIRA 12:7)

(Fergana--Petroleum geology)

AUTHOR: Ravikovich, V.M.

TITLE: Some Characteristics of a Voltage Converter with a Pulsed "Reactor" (O nekotorykh kharakteristikakh preobrazovatelya napryazheniya s impul'snyy reaktorom)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1957, Nr 5, pp.96-101 (USSR)

ABSTRACT: A pulsed DC converter is a device which produces a high-voltage DC output by rectification of pulses obtained by shock exciting a resonant circuit. A simplified circuit is shown in Fig.1. For normal operation, the following relationships must be observed:

$$L_{13} \gg 2kTE^2/R_H l_M^2, \quad (1)$$

$$L_{13} < (E_B - U_R)qT/I_{12}, \quad (2)$$

$$U_{AG} \gg E'_g/g, \quad (3)$$

$$\rho = \sqrt{L_{45}/C} \gg E^2/(I_M^2 - P/PI), \quad (4)$$

Card 1/11

1.10-1-00/40

Some Characteristics of a Voltage Converter with a Raised "Reactor".

where $P = E^2/R_H$,

$$f = 1/2\pi\sqrt{I_{H.5}C} \gg (10 - 20)F, \quad (5)$$

where $C = C_L + C_D + C_{ak} (F, 1)$,

$$C \gg 3.3/(n(1 - U_H/L_{13}I_{H.5}F)), \quad (6)$$

where L_{13} - inductance of the anode winding of the reactor (driving) valve; E - voltage across the load; R_H - load resistance; $n = 3 - 4$ - coefficient, taking into account the fact that all the energy stored in the inductance is not used; $T = 1/F$ - repetition frequency; $I_{H.5}$ - maximum valve current; E_σ - supply voltage; U_H - anode bend voltage of Λ_{13} ; $\alpha = T'/T = 0.5 - 0.9$ - where T' is the time that Λ_{13} is non-conducting; U_{ag} - grid-cathode

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11C-7-10/40

Some Characteristics of a Voltage Converter with a Pulsed "Resistor".

voltage of $\mathcal{A}_2$; E'_g - triggering voltage on $\mathcal{A}_2$ grid;

Q - Q -factor of the circuit, measured from points 1, 3.

Any other symbols are as in Fig.1. The variation of the load voltage E against load resistance R_H is first investigated. It is assumed that the following conditions are fulfilled:

$$R_1 C_1 \gg 1 \quad (7)$$

$$R_{1D} \ll R_H + R_\phi = R_1 \quad (8)$$

$$C_1 \gg C \quad (9)$$

$$I_H = \text{const} (R_H) \quad (10)$$

$$R_{12} \gg R_{oc} \quad (11)$$

when $|U_{g1}| > |E'_g|$, where $C'_{ak} = C_{ak}(W_{15}/W_{45})^2$, R_ϕ ,

R_{1D} as in Fig.1. $R_{oc} = Q^2$ - the equivalent parallel load